

WHAT IS CLAIMED IS:

1. An organic electroluminescence device having at least an anode, a light-emitting zone and a cathode, wherein the light-emitting zone comprises a mixture containing at least two compounds, and the spectrum of the luminescence from
5 light-emitting zone includes at least one peak at a wavelength which is different from neither of fluorescent peak positions of the compounds included in light-emitting zone.

2. The organic electroluminescence device according to Claim 1 wherein the spectrum of the luminescence from light-emitting zone includes at least one peak at a wavelength which is longer than neither of fluorescent peak positions of the
5 compounds included in light-emitting zone.

3. The organic electroluminescence device according to Claim 1 wherein the light-emitting zone comprises a mixture containing at least two electroluminescent materials.

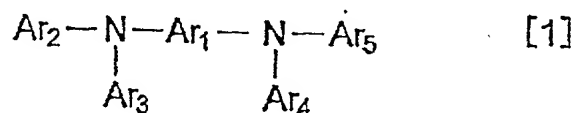
4. The organic electroluminescence device according to Claim 2 wherein the light-emitting zone comprises a mixture containing at least two electroluminescent materials.

5. The organic electroluminescence device according to Claim 1 wherein the light-emitting zone comprises a mixture

containing at least one electroluminescent material and one fluorescence material.

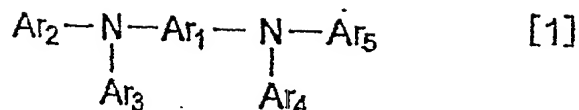
6. The organic electroluminescence device according to Claim 2 wherein the light-emitting zone comprises a mixture containing at least one electroluminescent material and one fluorescence material.

7. The organic electroluminescence device according to Claim 1 wherein light-emitting zone comprises a mixture containing at least one electroluminescent material represented by the following formula [1]



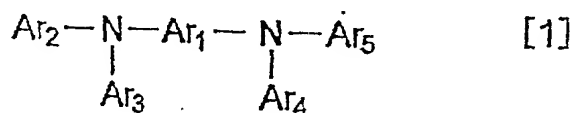
5 wherein Ar1 designates a substituted or non-substituted arylene group having 5 to 42 carbon atoms, Ar2 to Ar5 designate, independently with one another, a substituted or non-substituted aryl group having 6 to 20 carbon atoms.

8. The organic electroluminescence device according to Claim 2 wherein light-emitting zone comprises a mixture containing at least one electroluminescent material represented by the following formula [1]



- 5 wherein Ar1 designates a substituted or non-substituted arylene group having 5 to 42 carbon atoms, Ar2 to Ar5 designate, independently with one another, a substituted or non-substituted aryl group having 6 to 20 carbon atoms.

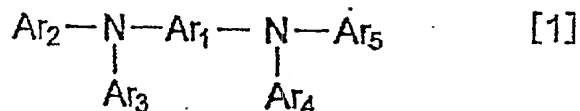
9. The organic electroluminescence device according to Claim 3 wherein light-emitting zone comprises a mixture containing at least one electroluminescent material represented by the following formula [1]



- 5 wherein Ar1 designates a substituted or non-substituted arylene group having 5 to 42 carbon atoms, Ar2 to Ar5 designate, independently with one another, a substituted or non-substituted aryl group having 6 to 20 carbon atoms.

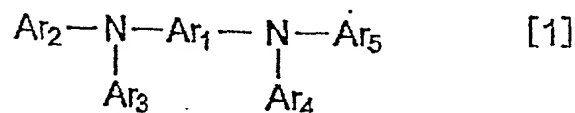
10. The organic electroluminescence device according to Claim 4 wherein light-emitting zone comprises a

mixture containing at least one electroluminescent material represented by the following formula [1]



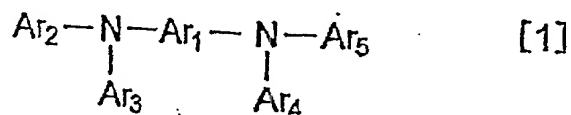
- 5 wherein Ar1 designates a substituted or non-substituted arylene group having 5 to 42 carbon atoms, Ar2 to Ar5 designate, independently with one another, a substituted or non-substituted aryl group having 6 to 20 carbon atoms.

11. The organic electroluminescence device according to Claim 5 wherein light-emitting zone comprises a mixture containing at least one electroluminescent material represented by the following formula [1]



- 5 wherein Ar1 designates a substituted or non-substituted arylene group having 5 to 42 carbon atoms, Ar2 to Ar5 designate, independently with one another, a substituted or non-substituted aryl group having 6 to 20 carbon atoms.

12. The organic electroluminescence device according to Claim 6 wherein light-emitting zone comprises a mixture containing at least one electroluminescent material represented by the following formula [1]



- 5 wherein Ar1 designates a substituted or non-substituted arylene group having 5 to 42 carbon atoms, Ar2 to Ar5 designate, independently with one another, a substituted or non-substituted aryl group having 6 to 20 carbon atoms.

13. The organic electroluminescence device according to Claim 7 wherein at least one of Ar2 to Ar5 of the compound represented by the formula [1] has a substituted or non-substituted styryl group as a substituent.

14. The organic electroluminescence device according to Claim 8 wherein at least one of Ar2 to Ar5 of the compound represented by the formula [1] has a substituted or non-substituted styryl group as a substituent.

15. The organic electroluminescence device according to Claim 9 wherein at least one of Ar2 to Ar5 of the

compound represented by the formula [1] has a substituted or non-substituted styryl group as a substituent.

16. The organic electroluminescence device according to Claim 10 wherein at least one of Ar₂ to Ar₅ of the compound represented by the formula [1] has a substituted or non-substituted styryl group as a substituent.

17. The organic electroluminescence device according to Claim 11 wherein at least one of Ar₂ to Ar₅ of the compound represented by the formula [1] has a substituted or non-substituted styryl group as a substituent.

18. The organic electroluminescence device according to Claim 12 wherein at least one of Ar₂ to Ar₅ of the compound represented by the formula [1] has a substituted or non-substituted styryl group as a substituent.

19. The organic electroluminescence device according to Claim 1 wherein the light-emitting zone comprises a mixture containing at least one of fluorescence materials such as a substituted or non-substituted aromatic hydrocarbon, a substituted or non-substituted fused polycyclic hydrocarbon, a substituted or non-substituted heterocyclic compound, and a substituted or non-substituted fused heterocyclic compound.

20. The organic electroluminescence device according to Claim 2 wherein the light-emitting zone comprises a mixture containing at least one of fluorescence materials such as a substituted or non-substituted aromatic hydrocarbon, a substituted or non-substituted fused polycyclic hydrocarbon, a substituted or non-substituted heterocyclic compound, and a substituted or non-substituted fused heterocyclic compound.

21. The organic electroluminescence device according to Claim 5 wherein the light-emitting zone comprises a mixture containing at least one of fluorescence materials such as a substituted or non-substituted aromatic hydrocarbon, a substituted or non-substituted fused polycyclic hydrocarbon, a substituted or non-substituted heterocyclic compound, and a substituted or non-substituted fused heterocyclic compound.

22. The organic electroluminescence device according to Claim 6 wherein the light-emitting zone comprises a mixture containing at least one of fluorescence materials such as a substituted or non-substituted aromatic hydrocarbon, a substituted or non-substituted fused polycyclic hydrocarbon, a substituted or non-substituted heterocyclic compound, and a substituted or non-substituted fused heterocyclic compound.

23. The organic electroluminescence device according to Claim 7 wherein the light-emitting zone comprises

a mixture containing at least one of fluorescence materials such as a substituted or non-substituted aromatic hydrocarbon, a substituted or non-substituted fused polycyclic hydrocarbon, a substituted or non-substituted heterocyclic compound, and a substituted or non-substituted fused heterocyclic compound.

24. The organic electroluminescence device according to Claim 8 wherein the light-emitting zone comprises a mixture containing at least one of fluorescence materials such as a substituted or non-substituted aromatic hydrocarbon, a substituted or non-substituted fused polycyclic hydrocarbon, a substituted or non-substituted heterocyclic compound, and a substituted or non-substituted fused heterocyclic compound.

25. The organic electroluminescence device according to Claim 9 wherein the light-emitting zone comprises a mixture containing at least one of fluorescence materials such as a substituted or non-substituted aromatic hydrocarbon, a substituted or non-substituted fused polycyclic hydrocarbon, a substituted or non-substituted heterocyclic compound, and a substituted or non-substituted fused heterocyclic compound.

26. The organic electroluminescence device according to Claim 10 wherein the light-emitting zone comprises a mixture containing at least one of fluorescence materials such as a substituted or non-substituted aromatic

- 5 hydrocarbon, a substituted or non-substituted fused polycyclic hydrocarbon, a substituted or non-substituted heterocyclic compound, and a substituted or non-substituted fused heterocyclic compound.

27. The organic electroluminescence device according to Claim 11 wherein the light-emitting zone comprises a mixture containing at least one of fluorescence materials such as a substituted or non-substituted aromatic
- 5 hydrocarbon, a substituted or non-substituted fused polycyclic hydrocarbon, a substituted or non-substituted heterocyclic compound, and a substituted or non-substituted fused heterocyclic compound.

28. The organic electroluminescence device according to Claim 12 wherein the light-emitting zone comprises a mixture containing at least one of fluorescence materials such as a substituted or non-substituted aromatic
- 5 hydrocarbon, a substituted or non-substituted fused polycyclic hydrocarbon, a substituted or non-substituted heterocyclic compound, and a substituted or non-substituted fused heterocyclic compound.

29. The organic electroluminescence device according to Claim 13 wherein the light-emitting zone comprises a mixture containing at least one of fluorescence

materials such as a substituted or non-substituted aromatic
5 hydrocarbon, a substituted or non-substituted fused polycyclic
hydrocarbon, a substituted or non-substituted heterocyclic
compound, and a substituted or non-substituted fused
heterocyclic compound.

30. The organic electroluminescence device
according to Claim 14 wherein the light-emitting zone
comprises a mixture containing at least one of fluorescence
materials such as a substituted or non-substituted aromatic
5 hydrocarbon, a substituted or non-substituted fused polycyclic
hydrocarbon, a substituted or non-substituted heterocyclic
compound, and a substituted or non-substituted fused
heterocyclic compound.

31. The organic electroluminescence device
according to Claim 15 wherein the light-emitting zone
comprises a mixture containing at least one of fluorescence
materials such as a substituted or non-substituted aromatic
5 hydrocarbon, a substituted or non-substituted fused polycyclic
hydrocarbon, a substituted or non-substituted heterocyclic
compound, and a substituted or non-substituted fused
heterocyclic compound.

32. The organic electroluminescence device
according to Claim 16 wherein the light-emitting zone

comprises a mixture containing at least one of fluorescence materials such as a substituted or non-substituted aromatic hydrocarbon, a substituted or non-substituted fused polycyclic hydrocarbon, a substituted or non-substituted heterocyclic compound, and a substituted or non-substituted fused heterocyclic compound.

33. The organic electroluminescence device according to Claim 17 wherein the light-emitting zone comprises a mixture containing at least one of fluorescence materials such as a substituted or non-substituted aromatic hydrocarbon, a substituted or non-substituted fused polycyclic hydrocarbon, a substituted or non-substituted heterocyclic compound, and a substituted or non-substituted fused heterocyclic compound.

34. The organic electroluminescence device according to Claim 18 wherein the light-emitting zone comprises a mixture containing at least one of fluorescence materials such as a substituted or non-substituted aromatic hydrocarbon, a substituted or non-substituted fused polycyclic hydrocarbon, a substituted or non-substituted heterocyclic compound, and a substituted or non-substituted fused heterocyclic compound.

35. The organic electroluminescence device

according to Claim 1 wherein the light-emitting zone is adjacent to the anode.

36. The organic electroluminescence device according to Claim 2 wherein the light-emitting zone is adjacent to the anode.

37. The organic electroluminescence device according to Claim 3 wherein the light-emitting zone is adjacent to the anode.

38. The organic electroluminescence device according to Claim 4 wherein the light-emitting zone is adjacent to the anode.

39. The organic electroluminescence device according to Claim 5 wherein the light-emitting zone is adjacent to the anode.

40. The organic electroluminescence device according to Claim 6 wherein the light-emitting zone is adjacent to the anode.

41. The organic electroluminescence device according to Claim 7 wherein the light-emitting zone is adjacent to the anode.

42. The organic electroluminescence device according to Claim 8 wherein the light-emitting zone is adjacent to the anode.

43. The organic electroluminescence device according to Claim 9 wherein the light-emitting zone is adjacent to the anode.

44. The organic electroluminescence device according to Claim 10 wherein the light-emitting zone is adjacent to the anode.

45. The organic electroluminescence device according to Claim 11 wherein the light-emitting zone is adjacent to the anode.

46. The organic electroluminescence device according to Claim 12 wherein the light-emitting zone is adjacent to the anode.

47. The organic electroluminescence device according to Claim 13 wherein the light-emitting zone is adjacent to the anode.

48. The organic electroluminescence device according to Claim 14 wherein the light-emitting zone is adjacent to the anode.

49. The organic electroluminescence device according to Claim 15 wherein the light-emitting zone is adjacent to the anode.

50. The organic electroluminescence device according to Claim 16 wherein the light-emitting zone is adjacent to the anode.

51. The organic electroluminescence device according to Claim 17 wherein the light-emitting zone is adjacent to the anode.

52. The organic electroluminescence device according to Claim 18 wherein the light-emitting zone is adjacent to the anode.

53. The organic electroluminescence device according to Claim 19 wherein the light-emitting zone is adjacent to the anode.

54. The organic electroluminescence device according to Claim 20 wherein the light-emitting zone is adjacent to the anode.

55. The organic electroluminescence device according to Claim 21 wherein the light-emitting zone is adjacent to the anode.

56. The organic electroluminescence device according to Claim 22 wherein the light-emitting zone is adjacent to the anode.

57. The organic electroluminescence device according to Claim 23 wherein the light-emitting zone is adjacent to the anode.

58. The organic electroluminescence device according to Claim 24 wherein the light-emitting zone is adjacent to the anode.

59. The organic electroluminescence device according to Claim 25 wherein the light-emitting zone is adjacent to the anode.

60. The organic electroluminescence device according to Claim 26 wherein the light-emitting zone is

adjacent to the anode.

61. The organic electroluminescence device according to Claim 27 wherein the light-emitting zone is adjacent to the anode.

62. The organic electroluminescence device according to Claim 28 wherein the light-emitting zone is adjacent to the anode.

63. The organic electroluminescence device according to Claim 29 wherein the light-emitting zone is adjacent to the anode.

64. The organic electroluminescence device according to Claim 30 wherein the light-emitting zone is adjacent to the anode.

65. The organic electroluminescence device according to Claim 31 wherein the light-emitting zone is adjacent to the anode.

66. The organic electroluminescence device according to Claim 32 wherein the light-emitting zone is adjacent to the anode.

67. The organic electroluminescence device according to Claim 33 wherein the light-emitting zone is adjacent to the anode.

68. The organic electroluminescence device according to Claim 34 wherein the light-emitting zone is adjacent to the anode.

69. The organic electroluminescence device according to Claim 1 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

70. The organic electroluminescence device according to Claim 2 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

71. The organic electroluminescence device according to Claim 3 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

72. The organic electroluminescence device according to Claim 4 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

73. The organic electroluminescence device according to Claim 5 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

74. The organic electroluminescence device according to Claim 6 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

75. The organic electroluminescence device according to Claim 7 wherein a hole-injecting zone is present

between the anode and the light-emitting zone.

76. The organic electroluminescence device according to Claim 8 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

77. The organic electroluminescence device according to Claim 9 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

78. The organic electroluminescence device according to Claim 10 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

79. The organic electroluminescence device according to Claim 11 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

80. The organic electroluminescence device according to Claim 12 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

81. The organic electroluminescence device according to Claim 13 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

82. The organic electroluminescence device according to Claim 14 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

83. The organic electroluminescence device according to Claim 15 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

84. The organic electroluminescence device according to Claim 16 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

85. The organic electroluminescence device according to Claim 17 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

86. The organic electroluminescence device according to Claim 18 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

87. The organic electroluminescence device according to Claim 19 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

88. The organic electroluminescence device according to Claim 20 wherein a hole-injecting zone is present

between the anode and the light-emitting zone.

89. The organic electroluminescence device according to Claim 21 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

90. The organic electroluminescence device according to Claim 22 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

91. The organic electroluminescence device according to Claim 23 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

92. The organic electroluminescence device according to Claim 24 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

93. The organic electroluminescence device according to Claim 25 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

94. The organic electroluminescence device according to Claim 26 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

95. The organic electroluminescence device according to Claim 27 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

96. The organic electroluminescence device according to Claim 28 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

97. The organic electroluminescence device according to Claim 29 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

98. The organic electroluminescence device according to Claim 30 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

99. The organic electroluminescence device according to Claim 31 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

100. The organic electroluminescence device according to Claim 32 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

101. The organic electroluminescence device according to Claim 33 wherein a hole-injecting zone is present

between the anode and the light-emitting zone.

102. The organic electroluminescence device according to Claim 34 wherein a hole-injecting zone is present between the anode and the light-emitting zone.

103. The organic electroluminescence device according to any one of Claims 35 to 102 wherein an electron-injecting zone is present between the cathode and the light-emitting zone.